# ORACLE APPLICATION DEVELOPMENT FRAMEWORK (ORACLE ADF) 11G

**KEY FEATURES AND BENEFITS**

ORACLE ADF 11G FEATURES

- Powerful Components for REA/RIA
- Page Flow 2.0
- Declarative Data Binding
- Declarative Business Services
- Multi-Channel Client Support
- Declarative End-to-End Security
- Declarative Application Customization
- Reusability
- Developer Productivity
- Ease of Use

*Oracle ADF is an end-to-end development framework, built on top of the Enterprise Java platform, offering unparalleled productivity to application developers. The framework provides integrated infrastructure solutions for the various layers of the application and an easy way to develop on top of them.*

## Components For Rich Enterprise Applications

Oracle ADF includes a set of over a 150 standards-based Java Server Faces (JSF) components with built-in Ajax functionality. With these components, web deployed user interfaces can be developed with a level of functionality and interactivity previously reserved for thick-client applications. The components offer data interaction, data visualization, and encapsulated browser side operations in a set of easy to use components that makes rich client application development easier than ever.

## Page Flow 2.0

Oracle ADF extends the basic JSF controller to provide the ADF Controller. The ADF Controller solves some of the key problems inherent in Rich Enterprise Applications by providing: enhanced page and operations flow control, comprehensive state management, and reusability of flows as components in other flows and inside JSF pages and portals.

## Drag and Drop Data Binding

ADF provides a data-binding framework that simplifies the task of binding UI to business services down to simple drag and drop operations in the IDE. This is done while still keeping the independence of the business service from its consumer. With the framework, the UI developer is insulated from the underlying implementation of the business service layer. This makes the process of building the UI truly decoupled from the implementation of the business service layer, better positioning the application for implementation in a service-oriented architecture.

## ADF Business Components

ADF Business Components stands out for the task of business service development and object relational mapping by virtue of its highly declarative metadata based development style. These powerful components are visually designed and customized to allow declarative access to relational databases. The business components can implement custom business functionality, declarative validation, security, and advanced object-relational integration.

ADF Business Components is just one of the possible business service implementations within the ADF meta-framework. Developers are also free to use EJB/JPA, Web Services, POJOs and other implementations for the service layer.

### Multi-channel Clients

ADF applications can be developed with an eye towards a variety of delivery methods. The framework supports direct implementation of web-based interfaces, mobile delivery, and desktop applications, including integration with Microsoft Excel. This is as simple as designing the application to utilize the appropriate components catered to the delivery methods of choice. In many cases the components utilized to implement one delivery method can provide support for others with no changes needed.

### Security

ADF provides a robust permission based security implementation that integrates into an ADF based application in a declarative fashion. Security can be implemented at various layers within the application to achieve the desired level of security granularity. ADF Security is based on Oracle Platform Security Services (OPSS), the security foundation for Oracle Fusion Middleware and is fully integrated with enterprise identity & access management components. Existing investments can be reused such as Oracle Access Manager for Single Sign-on or Oracle Internet Directory and Microsft Active Directory for LDAP Services.

### Declarative Application Customization

ADF provides out-of-the-box declarative application customization, using the capabilities of Oracle's metadata repository. Any ADF application can be customized by layering on changes to an application without modifying the base source code. Customization can be done for each of the layers of the framework achieving a customized application fitting the needs of specific users.

### Productivity

ADF application development using Oracle JDeveloper offers a comprehensive visual and declarative experience. This means that wherever possible the developer has the capability to design an application utilizing visual editors and diagrams and then customize that design through integrated dialogs and property inspectors. JDeveloper also provides the ability for the developer to choose to directly manipulate source code at any time. This provides the option to switch between development styles at will to suit the type of application or preferences of the developer.

JDeveloper provides a complete debugging solution that allows you to set breakpoints within the multiple languages and frameworks that are typically used within an application, for example, Java, JSP, PL/SQL and ADF. JDeveloper alone offers this unique unified debugging experience, seamlessly stepping the developer through these code and framework layers.

Along with the superior reusability features already described, ADF provides additional support for reusability through ADF Libraries and the Business Resource

Catalog. These allow you to package up and share various framework artifacts and business components into simple distributable archives.

## Conclusion

Oracle's Application Development Framework offers an unparalleled level of productivity for application developers looking to build enterprise applications based on industry standards. ADF stands alone by providing amazing features out of the box with all of the plumbing already provided for the developer. With this easy to use framework, organizations can bring the richest levels of feature functionality to their developed applications. Finally, by utilizing JDeveloper for ADF development, the vision of "Productivity with Choice" makes any development effort capable of achieving unequalled team productivity with a minimum of required effort.

Oracle is committed to developing practices and products that help protect the environment